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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/774,316 | 02/06/2004 | Eric R. Smith | 2004B009 | 8535 |

7590 05/04/2007

ExxonMobil Chemical Company
Law Technology
P.O. Box 2149
Baytown, TX 77522-2149

| EXAMINER | |
|---|---|
| HUSON, MONICA ANNE | |
| ART UNIT | PAPER NUMBER |
| 1732 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 05/04/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/774,316 | SMITH ET AL. | |
| | Examiner | Art Unit | |
| | Monica A. Huson | 1732 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *16 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *2,13 and 18-37* is/are allowed.

6)☒ Claim(s) *1,3-9,11,12 and 14-17* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

This office action is in response to the Amendment filed 16 February 2007.

Due to applicant's amendments, the objection to claims 5-7 is withdrawn.

Due to applicant's amendments, the rejection of claim 10 under 35 USC 112 is withdrawn.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3-7 are rejected under 35 USC 102(b) as being anticipated by DeJuneas et al. (U.S. Patent 4,013,622).

Regarding Claim 1, DeJuneas et al., hereafter "DeJuneas," show that it is known to carry out a method of manufacturing a blow molded article (Column 2, lines 13-14) comprising (a) blow molding a first composition comprising a first polyethylene into a shaped article (Column 1, lines 10-14; Column 2, lines 13-14; Column 3, lines 5-6); (b) perceiving molding defects in the process or molded article (Colun 1, lines 14-21, 44-47); and (c) then providing to said process a small amount of a low molecular weight polyethylene glycol (Column 1, lines 47-53).

Regarding Claim 3, DeJuneas shows the process as claimed as discussed above in the rejection of claim 1 above, including a method

wherein the amount of polyethylene glycol provided to said process is from about 400 to about 2000 ppm (Column 2, lines 62-67).

Regarding Claim 4, DeJuneas shows the process as claimed as discussed above in the rejection of claim 1 above, including a method wherein the amount of polyethylene glycol added is from about 400 to about 1200 ppm based on the weight of the composition (Column 2, lines 62-67).

Regarding Claim 5, DeJuneas shows the process as claimed as discussed above in the rejection of claim 4 above, including a method wherein the amount of polyethylene glycol added is no more than about 1100 ppm based on the weight of the composition (Column 2, lines 62-67).

Regarding Claim 6, DeJuneas shows the process as claimed as discussed above in the rejection of claim 4 above, including a method wherein the amount of polyethylene glycol added is no more than about 800 ppm based on the weight of the composition (Column 2, lines 62-67).

Regarding Claim 7, DeJuneas shows the process as claimed as discussed above in the rejection of claim 4 above, including a method wherein the amount of polyethylene glycol added is no more than about 700 ppm based on the weight of the composition (Column 2, lines 62-67).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8 and 9 are rejected under 35 USC 103(a) as being upatentable over DeJuneas.

Regarding Claim 8, DeJuneas shows the process as claimed as discussed above in the rejection of claim 1 above, including a method wherein the polyethylene glycol has a molecular weight of about 600 (Column 2, lines 46-50; It is being interpreted that DeJuneas' "about 600" would meet the claimed "about 500".), meeting applicant's claim.

Regarding Claim 9, DeJuneas shows the process as claimed as discussed above in the rejection of claim 1 above, but he does not show the particularly-claimed melt index. However, it is well established that proportions or values are critical only when they involve difference in kind rather than in degree. *In re Touvay et al.* 121 USPQ 265. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to select any applicable melt index as a characteristic of the additive during DeJuneas' method in order to satisfy specific end-use requirements.

Claims 11-12 and 16-17 are rejected under 35 USC 103(a) as being unpatentable over DeJuneas, in view of Duchesne et al. (U.S. Patent 4,855,360).

Regarding Claim 11, DeJuneas shows that it is known to carry out a method of reducing melt defects in the blow molding of a composition (Column 2, lines 13-14) comprising polyethylene, said method comprising incorporating a small amount of a low molecular weight polyethylene glycol in said composition prior to said blow molding to provide a new composition a new composition and then blow molding said new composition (Column 1, lines 44-53). DeJuneas does not specifically show using HDPE as the starting composition. Duchesne et al., hereafter "Duchesne," show that it is known to carry out a method wherein HDPE is modified to reduce melt defects (Column 3, lines 39-42). It would have been prima facie obvious to one of ordinary skill in

the art at the time the invention was made to take advantage of the high density properties of the polymer.

Regarding Claim 12, DeJuneas shows the process as claimed as discussed above in the rejection of claim 11 above, including a method wherein the amount of polyethylene glycol added is from about 400 to about 1200 ppm based on the weight of the composition (Column 2, lines 62-67), meeting applicant's claim.

Regarding Claim 16, DeJuneas shows the process as claimed as discussed above in the rejection of claim 11 above, but he does not show using a specific polyethylene glycol. Duchesne shows that it is known to carry out a method wherein said polyethylene glycol is PEG-400 (Column 6, lines 35-37). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Duchesne's PEG-400 as that in DeJuneas' molding process in order to take advantage of the specific melt-altering properties of PEG-400.

Regarding Claim 17, DeJuneas shows the process as claimed as discussed above in the rejection of claim 11 above, but he does not show the particularly-claimed melt index. However, it is well established that proportions or values are critical only when they involve difference in kind rather than in degree. *In re Touvay et al.* 121 USPQ 265. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to select any applicable melt index as a characteristic of the additive during DeJuneas' method in order to satisfy specific end-use requirements.

Claims 14 and 15 are rejected under 35 USC 103(a) as being unpatentable over DeJuneas and Duchesne, further in view of Mills (U.S. Patent 4,504,615).

Regarding Claim 14, DeJuneas shows the process as claimed as discussed above in the rejection of claim 11 above, including showing

using antioxidants (Column 2, lines 26-27), but he does not show using hindered phenolics in his composition. Mills shows that it is known to carry out a method wherein a new composition is formed using an antioxidant selected from hindered phenolics (Abstract). Mills and DeJuneas are combinable because they are concerned with a similar technical field, namely that of methods of modifying polymers per desired specifications. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Mills' hindered phenolics in DeJuneas' polyethylene in order to stabilize the neat polyethylene (See Mills, Column 1, lines 42-43).

Regarding Claim 15, DeJuneas shows the process as claimed as discussed above in the rejection of claim 11 above, including adding polyethylene glycol to a polyethylene (Column 1, lines 66-68). DeJuneas does not specifically show using HDPE. Duchesne shows that it is known to carry out a method wherein HDPE's are modified according to end-use specifications (Column 2, lines 1-7; Column 3, lines 39-42). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use HDPE as the polyethylene in DeJuneas' molding process in order to take advantage of the high density properties of the polymer. DeJuneas shows using an antioxidant in his composition, but not hindered phenolics. Mills shows that it is known to carry out a method wherein a new composition is formed using an antioxidant selected from hindered phenolics (Abstract). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Mills' hindered phenolics in DeJuneas' polyethylene in order to stabilize the neat polyethylene (See Mills, Column 1, lines 42-43).

***Response to Arguments***

Applicant's arguments filed 16 February 2007 have been fully considered but they are not persuasive.

Applicant contends that blown films are not blow molded articles, nor is a blown film fabrication process a blow molding process. This is not persuasive because, in the most general sense, any molded article that is made using a direct application of fluid pressure could be termed a blow molded article. Similarly, a molding process which uses a direct application of fluid pressure to form an article (e.g. a film), could be termed a blow molding process. It is acknowledged that many blow molding processes are non-continuous and include a step of expanding an extruded parison within a mold. However, the claim does not require such steps. Therefore, it is maintained that DeJuneas' blown film process (see Column 1, lines 11-13 that in a blown film process includes extruding plastic into an annular parison to form the film envelope that is subsequently blown) does, in fact, relate to the generally-claimed blow molding process.

Applicant contends that the Office Action has suggested that cuffing is inherent to blow molding processes, but that cuffing is actually not inherent. This is not persuasive because there was never such an assertion of inherency. The examiner has interpreted that the claimed cuffing would be included as an imperfection or breakdown as described by DeJuneas (Column 1, lines 22-25,44-47). Applicant has noted that cuffing can be caused by wear and tear, improper alignment [of machine components], or incorrect temperatures (See bottom of page 9, top of page 10 of Applicant's response); DeJuneas corroborates these causes for cuffing (i.e. breakdown) at Column 2, lines 17-23. Therefore, it is maintained that DeJuneas' disclosure discusses cuffing during blow molding and adding polyethylene glycol in response to and to reduce the occurrence of cuffing (i.e. breakdown).

In general, regarding all other rejections, applicant contends that the additional references do not cure the alleged deficiencies of DeJuneas, and therefore the rejections should be withdrawn for the same reasons as asserted relative to claim 1. This is not persuasive as noted in the preceeding two paragraphs.

Applicant contends that Duchesne is not relevant to the instant invention because he does not discuss blow molding. This is not persuasive as he clearly mentions the applicability of his resins to blow molding at Column 6, line 15 (as applicant has noted). As discussed above, it is being interpreted that any process which uses a direct application of fluid pressure can be termed a blow molding process.

Applicant contends that Mills, in combination with DeJuneas and Duchesne, does not suggest the instant invention because Mills does not suggest any fabrication or blow molding process. This is not persuasive because Mills was not cited to show that limitation.

### *Allowable Subject Matter*

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2, 13, and 18-37 are allowed.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory

period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Monica A Huson

Monica A Huson

May 2, 2007